



## DIO2092

### 4.2mA, 10MHz, RRIO CMOS Operational Amplifier

#### Features

- Rail-to-Rail Output
- Low Noise: 11.27nV/ $\sqrt{\text{Hz}}$
- Low Distortion
- Supply Voltage Range: 2.7V to 5.5V
- Low Input Offset Voltage: 3mV MAX
- Gain Bandwidth Product: 10MHz
- Slew Rate: 5.9V/ $\mu\text{s}$
- Low Power: 4.2mA/Amplifier
- Over-heat Protection:  $>140^{\circ}\text{C}$
- Small Packaging:
- Available in Green MSOP-8 and SOIC-8

#### Applications

- Data Acquisition
- Process Control
- Active Filters
- Test Equipment
- Mobile Phone
- Audio Processing
- Video Processing
- Headphone Amplifier
- Portable Equipment
- Broadband Communications
- to-D Driver/ D-to-a Driver

#### Descriptions

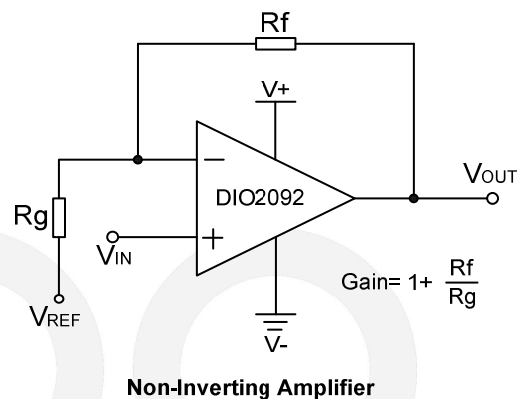
The DIO2092 is a dual, rail-to-rail output operational amplifier that is optimized and fully specified for 5V operation. High output current allows low load impedances to be driven.

The DIO2092 has a wide input common-mode voltage range and output voltage swing, running at single supply voltage from 2.7V to 5.5V.

The DIO2092 provides excellent overall performance. It exhibits low noise and distortion, low offset and high output current capability, making this device an excellent choice for high quality, low voltage or battery operated audio systems.

The DIO2092 is offered in Green MSOP-8 and SOIC-8 packages. It is specified over the extended  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  temperature range.

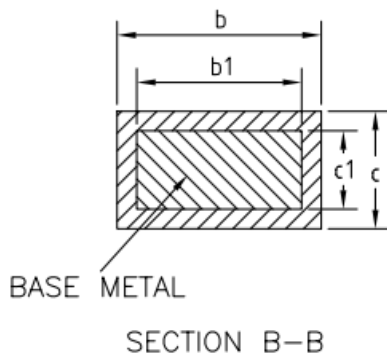
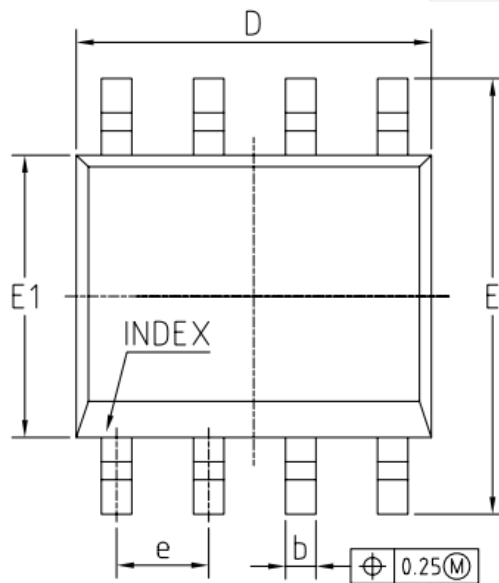
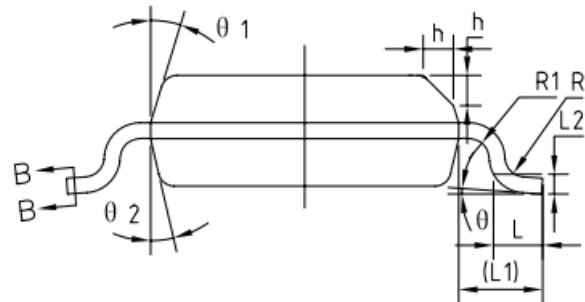
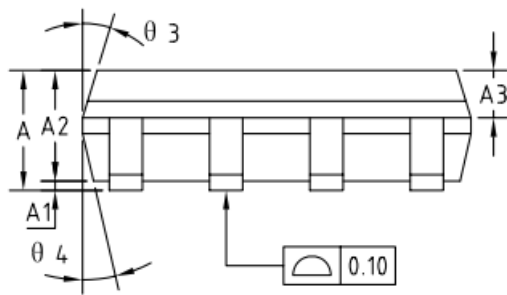
#### Typical Application



#### Ordering Information

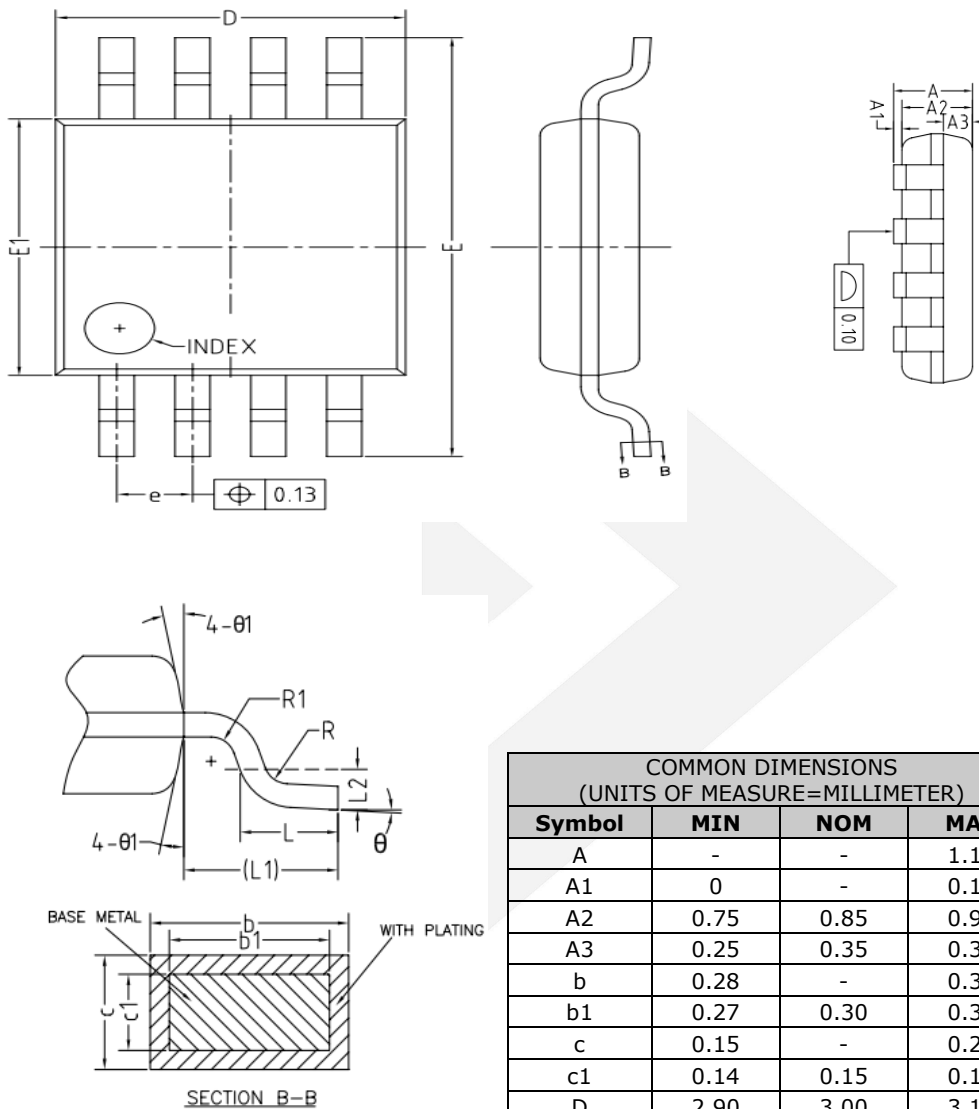
| Order Part Number | Top Marking |               | T <sub>A</sub> | Package |                   |
|-------------------|-------------|---------------|----------------|---------|-------------------|
| DIO2092SO8        | DIO2092     | Green or RoHS | -40 to +125°C  | SOIC-8  | Tape & Reel, 2500 |
| DIO2092MP8        | DIO2092     | Green or RoHS | -40 to +125°C  | MSOP-8  | Tape & Reel, 3000 |

# Physical Dimensions: SOIC-8



| COMMON DIMENSIONS<br>(UNITS OF MEASURE=MILLIMETER) |         |      |      |
|----------------------------------------------------|---------|------|------|
| Symbol                                             | MIN     | NOM  | MAX  |
| A                                                  | 1.35    | 1.55 | 1.75 |
| A1                                                 | 0.10    | 0.15 | 0.25 |
| A2                                                 | 1.25    | 1.40 | 1.65 |
| A3                                                 | 0.50    | 0.60 | 0.70 |
| b                                                  | 0.38    | -    | 0.51 |
| b1                                                 | 0.37    | 0.42 | 0.47 |
| c                                                  | 0.17    | -    | 0.25 |
| c1                                                 | 0.17    | 0.20 | 0.23 |
| D                                                  | 4.80    | 4.90 | 5.00 |
| E                                                  | 5.80    | 6.00 | 6.20 |
| E1                                                 | 3.80    | 3.90 | 4.00 |
| e                                                  | 1.27BSC |      |      |
| L                                                  | 0.45    | 0.60 | 0.80 |
| L1                                                 | 1.04REF |      |      |
| L2                                                 | 0.25BSC |      |      |
| R                                                  | 0.07    | -    | -    |
| R1                                                 | 0.07    | -    | -    |
| h                                                  | 0.30    | 0.40 | 0.50 |
| $\theta$                                           | 0°      | -    | 8°   |
| $\theta 1$                                         | 15°     | 17°  | 19°  |
| $\theta 2$                                         | 11°     | 13°  | 15°  |
| $\theta 3$                                         | 15°     | 17°  | 19°  |
| $\theta 4$                                         | 11°     | 13°  | 15°  |

## Physical Dimensions: MSOP-8



## CONTACT US

**D**ioo is a professional design and sales corporation for high-quality and performance analog semiconductors. The company focuses on industry markets, such as, cell phone, handheld products, laptop, and medical equipments and so on. Dioo's product families include analog signal processing and amplifying, LED drivers and charger IC. Go to <http://www.dioo.com> for a complete list of Dioo product families.

For additional product information, or full datasheet, please contact with our Sales Department or Representatives.

